MSC Guidelines for Review of Independent Diesel Fuel Tanks

Procedure Number: E1-16 Revision Date: 1/04/00

References

a. Title 46 CFR 58.50

Disclaimer

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Contact Information

If you have any questions or comments concerning this document, please contact the Marine Safety Center by e-mail or phone. Please refer to the Procedure Number: E1-16.

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General Review Guidance

- **Tanks with capacities > 400 gallons,** design calculations shall be submitted. The calculations should verify a design with a 4:1 safety factor based on the ultimate strength of the material with a design head of not less than 4 feet of liquid above the top of the tank (Title 46 CFR 58.50-10(a)(2)).
- **Tanks with capacities < 400 gallons** may submit design calculations as outlined above or conform to the following alternative requirements:
- Materials and plate thickness shall conform to those listed in Table 58.50-10(a). (Title 46 CFR 58.50-10(a)(2))
- Fill and vent openings shall be located on the top of the tank. Locations of machinery fuel supply piping and cleaning connections ports are unrestricted. (Title 46 CFR 58.50-10(a)(4))
- The *interior* of tanks shall not be galvanized. The *exterior* of the tanks shall be protected from corrosion. (Title 46 CFR 58.50-10(a)(9))

MSC Guidelines for Review of Independent Diesel Fuel Tanks (cont'd)

- Liquid level gauge connections shall be located at more than two inches from the bottom of the tank. The gauges shall be constructed of heat resistant materials, be adequately protected from damage and be fitted with self-closing valves located at the tanks connection. (Title 46 CFR 58.50-10(a)(4) & (6))

- Vertical baffle plates are required at intervals not to exceed 30 inches in any horizontal dimension. The plates shall be of the same material and not less than the minimum required plate thickness. (Title 46 CFR 58.50-10(a)(7))

- Positive shut-off valves, located at the tanks, are required in piping subject to head pressure from the fuel in the tanks. (Title 56.50-60(d))

- Fuel tanks shall be located as near as possible to the space being served. Tanks used for emergency lighting systems shall be located on an open deck or in a adequately ventilated metal compartment.. Maximum compartment temperature for all tanks is 150^0 F. (Title 46 CFR 58.50-10(b)(1))

- Longitudinal seams on cylindrical tanks shall be located at the top of the tank. (Title 46 CFR 58.50-10(b)(2))

- Tanks shall be electrically bonded to the common ground (Title 46 CFR 58.50-10(b)(5)).

- Nozzle, flange and pipe connections shall be brazed or welded to the tank. (Title 46 CFR 58.50-10(a)(5))

- Baffle plates shall be connected to the walls by welding or brazing. Limber holes shall be provided at the bottom and top of the baffle plates. (Title 46 CFR 58.50-10(a)(7))

- Location of tanks shall be such to allow for examinations, testing and cleaning. (Title 46 CFR 58.50-10(b)(3))

Attachments

- None